

V



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

PRELIMINARY ISSUE

650.6910

Job Sheet 210777

POSITIVE
RECALL

Part No: 650.6910

Job Qty: 5 pcs

Part Name: Shuttle Housing



Part Weight: 0 lbs

Status: New

POSITIVE RECALL

EFFECTIVE 21 AUTH JUN 22 2020

RELEASED 9-89 DATE

Priority: Medium

Job Created: 6/22/20

Job Tracking No:

Due Date: 7/15/20

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG 650.6900 REV PAT IPP REV A 20.06.18 NEW ISSUE FK VERIFY DD

Ship Via:

A139 Valve

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	SL-154 - 1	5 pcs	7/15/20	7/15/20	1.00	1.67	SL-154 - 1		
110	QC 2	5 pcs	7/15/20	7/15/20	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 57		
							QC 2 - 62		
							QC 2 - 63		
							QC 2 - 8		
							QC 2 - 66		
							QC 2 - 64		
							QC 2 - 65		

Plex 6/22/20 2:33 PM Dart.lajeunesse.marie



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Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
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650.6910

Job Sheet 210777



Part No: 650.6910

Job Qty: 8 pcs *5 pls*

Part Name: Shuttle Housing



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 6/22/20

Job Tracking No:

Due Date: 7/30/20

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG 650.6900 REV PA2 IPP REV A 20.06.18 NEW ISSUE FK VERIFY DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup	Run	Workcenter / Supplier	Lead Time	
					Hrs	Hrs			
100	SL-154 - 1	6 pcs	7/30/20	7/30/20	1.00	6.00	SL-154 - 1		<i>JB 20.08.05</i>
110	QC 2	6 pcs	7/30/20	7/30/20	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 57		
							QC 2 - 62		<i>JB 20.08.05</i>
							QC 2 - 63		
							QC 2 - 8		
							QC 2 - 66		
							QC 2 - 64		
							QC 2 - 65		



Container No: S291872



Part: 650.6910

Job No: 210777

Serial No/Batch: S291872

Revision: REV - PA2

Inspector:

Exp Date:

Instructions:

DART Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 08/05/20

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				QC 2 - 5	
				QC 2 - 71	
				QC 2 - 73	
				QC 2 - 69	
				QC 2 - 76	
				QC 2 - 86	
				QC 2 - 83	
120 QC 8	6 pcs	7/30/20	0.00 0.00	QC 8 - 12	7/20/08/21
				QC 8 - 14	
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
				QC 8 - 49	
				QC 8 - 58	
				QC 8 - 8	
				QC 8 - 9	
				QC 8 - 68	
				QC 8 - 67	
				QC 8 - 1 (A)	
				QC 8 - 47	
				QC 8 - 40	
				QC 8 - 52	
				QC 8 - 23	
				QC 8 - 57	
				QC 8 - 76	
				QC 8 - 61	
				QC 8 - 66	
				QC 8 - 73	
				QC 8 - 82	
130 Packaging 3-1 - Stock - B4B	6 pcs	7/30/20	0.00 0.00	Packaging 3 - 1 - B4B	DAS 82 9-89
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	AUG 27 2020
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 37 - B4B	
140 QC 21 - SA	6 pcs	7/30/20	0.00 0.00	QC 21 - SA - 21	
				QC 21 - SA - 70	
				QC 21 - SA - 9	
				QC 21 - SA - 77	

Part Op 100 - ***CRITICAL PART - EXTREME CARE MUST BE TAKEN*** 1-Machine as per folio FD315 FOLIO REV:
 Descriptions: AA DWG REV: PAS 2-Deburr

110 - QC2- Inspect parts off machine FAI/FAIB

120 - QC8- Inspect parts - second check

130 - Identify as per dwg & Stock Location: _____

140 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M303R1.000	303 Round Bar 1.00	1.0500 ft (.175 ea)	100-SL-154 - 1	S250215

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-SL-154 - 1	M303R1.000	1	40	0
Part Specifications				
Specifications could not be found.				

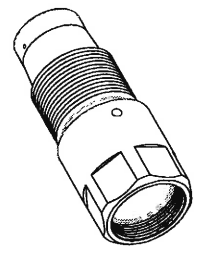
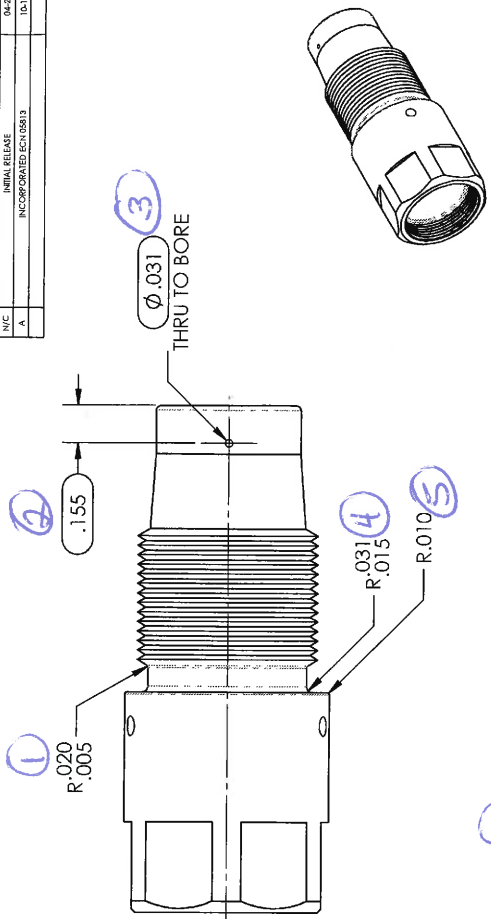
Plex 7/27/20 4:04 PM dart.brunette.jonathan

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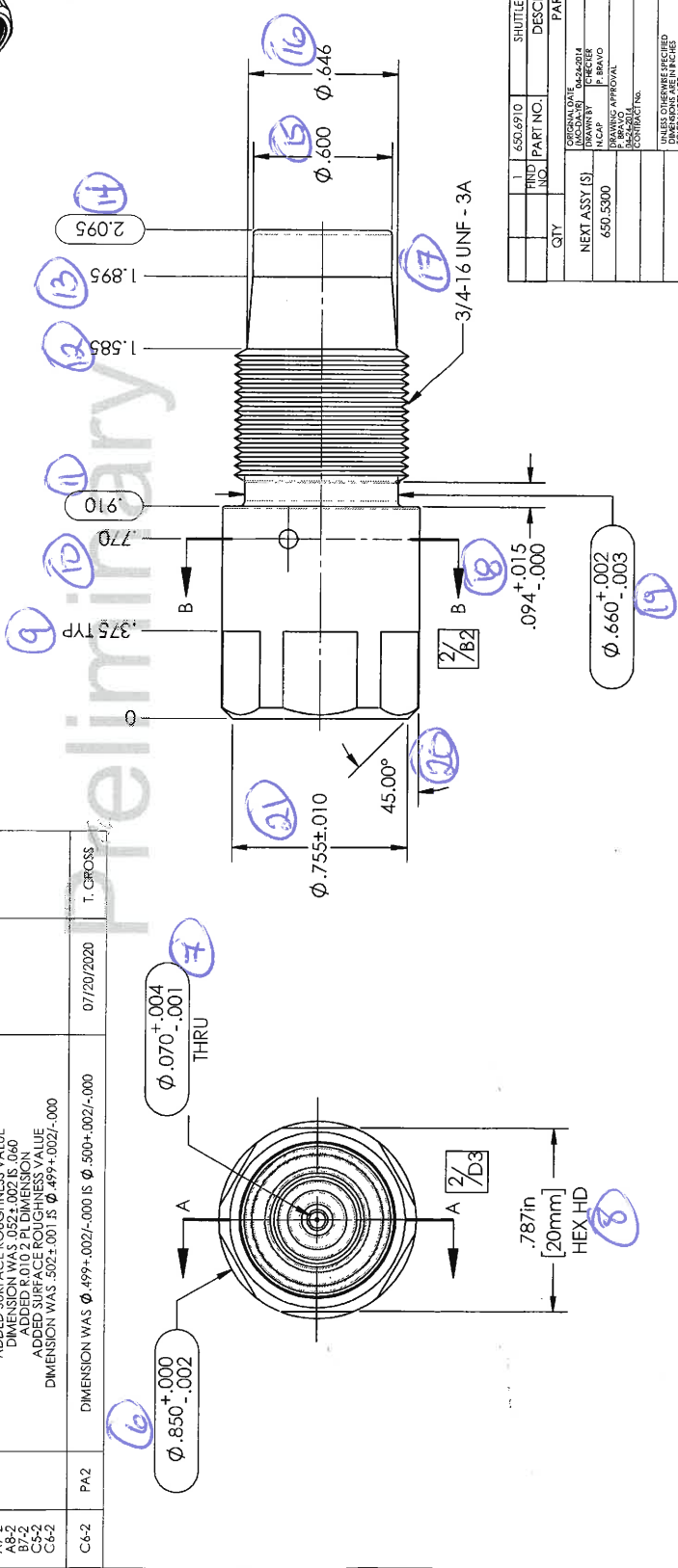
NOTES:

1. MATERIAL: 303 SS IAW AMS-5640
2. DEBURR AND BREAK ALL SHARP EDGES
3. IDENTIFY IAW MPP-120
4. FINISH ⁶³✓ UNLESS OTHERWISE SPECIFIED
5. CHECK THREAD DEPTH WITH MATING PART,
SPRING STOP. P/N 650.7310

PROTOTYPE REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
A5-1 B1-1 B3-1 B6-1 D4-1		ADDED R.005/-0.00 DIMENSION DIMENSION WAS .850+/.001 IS $\emptyset$.850/-0.00/-0.02 DIMENSION WAS $\emptyset$.070+/.005/-0.02 IS $\emptyset$.070+/.004/-0.01 ADDED R.015/-0.00 DIMENSION ADDED .094+/.015/-0.00 DIMENSION DIMENSION WAS $\emptyset$.660+/.002 IS $\emptyset$.660+/.002/-0.003		
A6-2	PA1	DIMENSION WAS .032+/.002 IS .027/-0.00 ADDED SURFACE ROUGHNESS VALUE ADDED SURFACE ROUGHNESS VALUE DIMENSION WAS .032+/.002 IS .040 ADDED R.010/0.2 PL DIMENSION ADDED SURFACE ROUGHNESS VALUE DIMENSION WAS .502+/.001 IS $\emptyset$.499+/.002/-0.000	06/01/2020	T. CROSS
A7-2 A8-2 B7-2 C5-2 C6-2				
C6-2	PA2	DIMENSION WAS $\emptyset$.499+/.002/-0.000 IS $\emptyset$.500+/.002/-0.000	07/20/2020	T. CROSS

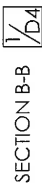


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SECTION A-A
SCALE 3:1

[illegible]

DART AEROSPACE LTD

Work Order:	210777
Part Number:	650.6910
Inspection Dwg: 650.6900	Rev: PA2
Page 1 of 2	

INSPECTION SHEET

	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1	R .005	+ .015 / - .000	R .013 ⁵	✓		RG 1/64	(Ref)
2	.155	± .005	.156 ⁴	✓		optical comp.	
3	Ø .031	± .005	.032	✓		GP .032 (wire)	(Ref)
4	R .015	+ .016 / - .000	R .022 ⁵	✓		RG 1/32 1/64	(Ref)
5	R .010	± .005	R .010	✓		RG 1/64	(Ref)
6	Ø .850	+ .000 / - .002	.8484	✓		Mic	JB-09
7	Ø .070	+ .004 / - .001	.069	✓		GP .069 .05	(Ref)
8	.787 HEX HD	± .005	.7858	✓		Mic	JB-09
9	.375 TYP	± .005	.375 ⁴	✓		optical comp.	
10	.770	± .005	.771 ²	✓		optical comp.	
11	.910	± .005	.910 ⁸	✓		optical comp.	
12	1.585	± .005	1.586 ⁴	✓		optical comp.	
13	1.895	± .005	1.892 ⁶	✓		optical comp.	
14	2.095	± .005	2.096	✓		HG	31007
15	Ø .600	± .005	.600 ³	✓		Mic	JB-09
16	Ø .646	± .005	.644 ⁶	✓		optical comp.	
17	¾ - 16 UNF - 3A	M.O.W.	¾ - 16 UNF 3A	✓		M.O.W. .040	
	MAJOR Ø	.7500 / .7453	.7458	✓		Mic	JB-09
	M.O.W. (.040)	.7753 / .7715	.773 ⁵	✓		Mic	JB-09
18	.094	+ .015 / - .000	.100 ⁷	✓		optical comp.	
19	Ø .660	+ .002 / - .003	.660 ¹	✓		Blade Mic	IG-insp6
20	45.00°	± .5°	45°	✓		optical comp.	
21	Ø .755	± .010	.755 ²	✓		optical comp.	
22	.140	± .005	.141	✓		HG	31007
23	Ø .081	± .005	.080	✓		GP .080	(Ref)
24	Ø .452	± .001	.452 ¹	✓		Mic + TG	JB-09
25	√32	-	17.5	✓		Surface roughness	
26	Ø .405 X 45.00°	± .005 X .5°	.405 ¹	✓		Mic + TG	JB-09
27	.010 X 45.00°	± .005 X .5°	.010 X 45°	✓		Visual inspection	

Measured by: JB	Checked by: [Signature]	QC Inspector:
Date: 20-08-05	Date: 20/08/21	Date:

Engineering Approval: (If necessary)	Date:
---	-------

Rev	Date	Change	Revised by	Approved
A	5-Aug-20	New Issue	MG	

DART AEROSPACE LTD

Work Order:	210777
Part Number:	650.6910
Page 2 of 2	

Description: SHUTTLE HOUSING

Inspection Dwg: 650.6900

Rev: PA2

INSPECTION SHEET

	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
28	.027	+ .003 / - .000	.0285	✓		HG	31007
29	√32	-	10	✓	S.R.T	Cont. measured too small	
30	√32	-	15	✓	S.R.T	Cont. measured too small	
31	.060	± .005	.061	✓		Vernier	JB-01
32	Ø .255	± .001	.2553	✓		CMM -	on scrap Part
33	R .010 - 2 PL	± .005	R.010	✓		visual inspection	
34	3/8 - 32 UNEF - 3B	GO / NO-GO	3/8-32 UNEF 3B	✓		GO / No-go	3/8-32 UNEF 3B
35	R .015	± .005	R.015	✓		Visual inspection	(#24/26)
36	Ø .565	± .001	.5648	✓		Mic + TG	JB-09
37	√32	-	17.5	✓		Surface roughness	
38	(.165)	± .005	.160	✓		Visual inspection	(tool on optical amp)
39	.185	± .005	.187	✓		Vernier	JB-01
40	(.642)	± .005	.638	✓		Vernier + GP	JB-01 (.564)
41	.675	± .003	.677	✓		Visual inspection	
42	.985	± .005	.987	✓		Vernier	JB-01
43	1.285 MIN THREAD DEPTH	+ .005 / - .000	1.290	✓		Vernier	JB-01 + GO/No-go
44	1.335	± .005	1.3365	✓		Vernier	JB-01
45	1.410	± .005	1.410	✓		Vernier	JB-01
46	(2.095)	± .005	2.096	✓		HG	31007
47	√16	-	15.6	✓		Surface roughness	
48	Ø .500	+ .002 / - .000	.5016	✓		Mic + TG	JB-09 + GP .500 .503
49	R .020 - 2 PL	± .005	R.020	✓		R6/64	(Ref)
50	R .015	± .005	R.015	✓		R6/64	(Ref)
51	R .008	± .005	R.010	✓		End Mill Rad .010	
52	R .005	± .005	R.005	✓		Visual inspection	
53	R .015	± .005	R.015	✓		Visual inspection	
54	R .008	± .005	R.008	✓		Visual inspection	
55	.665 - 32 UNF - 3B	GO / NO-GO	.665-32 UNF-3B	✓		GO / No-go	.665-32 UNF 3B
56	120.00°	± 5°	120°	✓		Visual inspection	

Measured by: JB	Checked by: [Signature]	QC Inspector:
Date: 20-08-05	Date: 20/08/21	Date:

Engineering Approval: (If necessary)	Date:
---	-------

Rev	Date	Change	Revised by	Approved
A	5-Aug-20	New Issue	MG	

57 303 SS AMS-5640 MILL TEST ATTENTION H/T 432071



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Telefono 0444.868211 - Fax 0444.863836
Stab.: 36100 BOLZANO (Italia) - Via A. Volta, 4/37
Telefono 0471.924111 - Fax 0471.924497

CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

In conformità a: **EN 10204 (2004), 3.1 / ISO 10474 (2013), 3.1**

Certificate nr. **MEST432174 / 2019 /**
Prüfung/Test/Exam

Cliente / Gestaltel/Purchase/Client

Stato di fornitura: **Hot rolled - Annealed Cold Drawn**
Lieferzustand
Delivery state
Etat de livraison

Produttore:
Hersteller/Lieferant/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: **303007442 Stock - Canada**
Bestell
Your order
Commande

Tipo di Elaborazione: **E+AOD**
Erzeugungsmethode
Melting process
Méthode d'élaboration

Marchi di Fabbrica:
Zeichen des Lieferwerkes
Trade marks
Siglas de fábrica productora



Conferma ordine nr: **E19002981**
Wohnst/Oder OrderRef nr.

Qualità: **303HS**
Werkstoff/Grade/Qualité

Punzone del Collaudatore:
Stempel des Werkstoffverständigen
Inspector's stamp/Person de l'essayeur

MR

Avviso di Spedizione: **D-BZ19004707**
Lieferanweisung/Shipping instr.

Marca: **MV188ZHS (MAXIVAL)**
Markenbezeichnung
Brand / Numéro

Punzonatura: **303HS**
Kennzeichnung
Marking
Marquage

SPECIFICHE:	Note:
Anforderungen / Requirements / Exigences	Auszeichnungen / Notes / Notes
VSI 0 303 HS A,CF AISI 303 AMS 5640 V S30300 A AMS 5640 V TYPE1 A ASME SA320 2017 B8F (0) ASTM A314 2015 S30300 ASTM A320 2017A B8F (1) ASTM A320 2017 ASTM A582 2012 S30300 A (2) MIL-S-882 B/1 303 QQ-S-784 B/2 303 A	(0)Section II Part A 2017 EDITION Chemical analysis only. (1)Chemical analysis only. (2)Reapproved 2017

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Tolleranza: **ASTM A484-18A TABLE 7**

Pos. nr.	Oggetto	Dimensioni - In	Lunghezza - In	Colata	Pezzi	Peso - LB	Lotto nr.
Pos. nr. N. de piece	Oggetto Part description Dess. de pièce	Dimensioni Dimensions	Length Longueur	Surface Eau de surface	Quantity Quantité	Poids Poids	Lot Lot
0010	Round	1,0000	146/ 148	432071	11	5.849	828910630

TEST ALLO STATO DI FORNITURA

Test on delivery condition / Prüfung auf Lieferbareitem produkt / Test à l'état de fourniture / Prueba sobre el material así como entregado

TEST	Proveite / Probes	Pos. nr.	Snervamento	Snervamento	Resistenza	Allungamento	Strizione	Resilienza	Durezza
	Specimen description Grain Size, Elong. With Char. Thickness Temp. etc., etc.	Pos. nr. N. de piece	Snervamento Yield Stress Rp 0.2%	Snervamento Yield Stress Yield Stress	Resistenza Tensile Strength Rm	Allungamento Elongation E-4d	Strizione Reduction of area RA	Resilienza Impact Resilience	Durezza Hardness HB
Valori richiesti	min	max	-	-	-	-	-	-	140
A	12,5	68	L	72	101	42	56		255

TEST ALLO STATO DI FORNITURA

Test on delivery condition / Prüfung auf Lieferbareitem produkt / Test à l'état de fourniture / Prueba sobre el material así como entregado

TEST	min	max
A Grain size for ASTM E112		7

Mechanical properties according to ASTM A370.

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata / Melt	min	0,030	0,20	1,50	17,00	0,80	1,00	5,00	0,02	0,000	0,000	0,000	0,000	0,000	0,000
Segno / Grade	max	0,050	1,00	2,00	18,00	0,80	1,00	10,00	0,100	0,000	0,000	0,000	0,000	0,000	0,000
432071	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	Zr %				
	0,037	0,45	1,85	17,05	0,46	0,65	8,26	0,164	0,032	0,33	0,0012				

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D

Vicenza, 02/07/19 VCQ052 - MEST432174	Il collaudatore di stabilimento der Werkstoffverständiger / Works Inspector / L'expert d'usine M. RIZZOTTO	Direzione Qualità Quality Management/Qualitätsmanagement/Qualité R. BERTELLI	Direzione Prodotto Product Management/Produkt Management/Produit P. MESSORI	Pagina 1 di 2
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37634

Shipping Order

22/01/2020

METAUX SOLUTIONS INC
2625 BOUL JACQUES CARTIER EST
LONGUEUIL, QUEBEC
J4N 1L7 Tel.: 450 641-3330

Order : 149625
Reference : pohb045541
Ship : PICK UP / PICK UP

Customer: 6323336

Ship To

DART AEROSPACE LTD
1270, ABERDEEN STREET
HAWKESBURY, ONTARIO
K6A 1K7

Same

Tel.: 1 613 632-3336

Item No.	Description	Qty	Qty. Delivered	B/O Qty
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N			
MR3441H	4140 HTSR ROU .750 DIA 1 x 22' ht;75070620	22	22	0
MR11841H	4140 HTSR ROU 1.125 DIA 1 x 20' r/l ***** ht;75072955	23.42	23.42	0
DT12083	MS TUB .500" X .083" WALL DOM 4 x 20' r/l ***** ht;mm18106467	81	81	0
SR583	303 ROU .625 DIA 2 x 12' r/l ht;462762	25	25	0
SR13	303 ROU 1.000 DIA 3 x 12' r/l ***** ht;432071	36	36	0
MP124130N	4130 NORM PLATE .500 THICK AMS 6345 40 x 3" x 14" ht;1961550	11.68	11.68	0
TP12A2	A-2 PLATE TFA 1/2" THICK 4 x 1.25" -0+ .0656" x 144" r/l ht;9919020379b-48-1 livre jp	102	102	0

DAS
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JAN 23 2020

Shipping : _____

Ref. : _____

Package No : _____

Merchandise Received: _____